III.   REMARKS/ARGUMENTS

- *STATUS OF THE CLAIMS*

Claim 1-44 are pending in this application. Claims 1-24 have been canceled. Claims 25-44 stand rejected. Claim 25, 26, 33, 35, 36, 43 and 44 have been amended, support for which can be found, inter alia, at paragraphs 0012, 0017, 0026, and Figures 2 and 5.

- *35 U.S.C. 112 REJECTION 1ST PARAGRAPH*

  - *Examiner's Stance*

Claim 25, 33 and 44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. According to the Examiner, the claims contains subject matter not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner, with regard to claim 25, states the Applicant introduces the limitation "an order identity of interest..." and that such terms and limitations constitute new matter. With regard to Claim 44 the Examiner states the Applicant introduces the limitation "A computer software product, comprising a computer-usable medium having computer readable instructions stored thereon ...;" also asserting that the limitations constitute new matter. The Examiner further states Claim 33 the Applicant introduces the limitation "blocking communication of one or more order executions to the trader..." and that such introduction constitutes new matter. The Examiner requests the applicant point out in the original disclosure where the claimed subject matter appears.

  - *Applicant's Response*

With respect to Claim 25 the Examiner is directed at least to paragraph (0005) which states: "*a system to track the quality of order execution in real time, or near real time, so the investor will know immediately whether a particular order is being handled well,*" (emphasis added) , and paragraph (0017) and "*when evaluation of a particular order or orders is desired the relevant order communication is sensed by a message interceptor and the identity of the order or orders to be evaluated is sent to an EQCM,*"(emphasis added). Figure 7, item 708, and paragraph (0030) also discloses an "*OrderID,*" "*(Order identifier)*", such that a trader, placing one or more orders on the market may effectuate the assessment of one or

more orders of interest based on the order identity.

The Applicant maintains that claim 44 is fully supported by the specification and that one of ordinary skill in the relevant art would reasonably deem that "the computer system" (para 0022) of an *"electronic communication network"* (para. 0001) such as that related to *"NASDAQ,"* and others, operating at the level of *"over two billion shares of stock every business day"* (para. 0002), would comprise one or more software products as part of the disclosed system where such software products comprise computer-useable medium having computer readable instructions stored thereon for carrying out the desired effect. Certainly, where *"an intercept in the electronic data connection between the executing broker and the trader's order management system"* in conjunction with *"an Execution Quality Calculation Module...calculates execution quality in real-time...and displays the results to the trader"* (para. 0006, emphasis added), constitutes software; having means to *"present[] a trader with means to view the execution quality"* and *"select[] and order from the list 401 as an input field for identifying the order to be analyzed in the display panel 402"* (para. 0022) and such non-transitory software would reside on a medium of the system in support of Claim 44.

The description needed to satisfy the requirements of 35 U.S.C. 112 "varies with the nature and scope of the invention at issue, and with the scientific and technologic knowledge already in existence." Eli Lilly, 119 F.3d at 1568, 43 USPQ2d at 1406. The level of knowledge in the field of electronic securities trading is clearly high. As stated in the Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, para. 1 of section 2163 II.A.3.(a) of the MPEP:

> Disclosure of any combination of such identifying characteristics that distinguish the claimed invention from other materials and would lead one of skill in the art to the conclusion that the applicant was in possession of the claimed species is sufficient.

The MPEP further states in 2163 II.A.3.(b) that:

> to comply with the written description requirement of 35 U.S.C. 112, para. 1, … each claim limitation must be expressly, implicitly, or inherently supported in the originally filed disclosure. When an explicit limitation in a claim "is not present in the written description whose benefit is sought it must be shown that a person of ordinary skill would have understood, at the time the patent application was filed, that the description requires that limitation."

> Hyatt v. Boone, 146 F.3d 1348, 1353, 47 USPQ2d 1128, 1131 (Fed. Cir. 1998). See also In re Wright, 866 F.2d 422, 425, 9 USPQ2d 1649, 1651 (Fed. Cir. 1989).

In the instant case, the level of technical expertise in the relevant art is clearly high and one skilled in the relevant art would understand that the processes, disclosed in light of the computer system and relevant operating environment, would be rendered in software, encoded on a computer useable medium as computer readable instructions. Given the implicit nature of using software for trading systems such as the NASDAQ, the Applicant believes they have reasonably conveyed the invention to one skilled in the art and has given possession of the claimed limitations, contrary to the allegation.

Claim 33 has been amended rending the rejection moot. Support for the amendment may be found, inter alia, at paragraph (0020). Therefore, the written description requirement with respect to Claims 25, 33 and 44 has been met and the Applicant respectfully request the rejections should be withdrawn.

- ### *35 U.S.C. 112 REJECTIONS 2ND PARAGRAPH*

  - #### *Examiner's Stance*

Claims 25-35 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. According to the Examiner, it is unclear what is meant by the term or phrase "an order identity of interest..." The Examiner asserts to have performed a word search in the originally filed specification and could not find this term or phrase.

  - #### *Applicant's Response*

Support for the Claim 25 term or phrase "an order identity of interest..." has been detailed with respect to the rejection under 35 U.S.C. 112, first paragraph described supra. As shown in Figure 7, and described in paragraphs (0005, 0017 and 0030), a particular order, identified by its order identity, may be of interest for evaluation. The Applicant, therefore, submits that the rejection to Claims 25-35 are overcome by the support, at least as shown, and respectfully request the rejection be withdrawn.

- *35 U.S.C. 101 REJECTIONS*

  - *Examiner's Stance*

Claims 25-35 have been rejected under 35 U.S.C. 101. Based on Supreme Court precedent and recent Federal Circuit decisions, the Office's guidance to examiners is that a § 101 process must (1) be tied to a machine or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. According to he Examiner the steps being performed by the computer system appear to be data gathering steps. The Examiner, on page 6 of the Office Action, recommends the Applicant "recite a computer system performing the most novel or inventive step in the method claim."

  - *Applicant's Response*

The Office Action held that because the claims allegedly do not meet the Machine-or-Transformation (M-or-T) Test, the claims are deemed not to recite patentable subject matter and the burden is passed to the Applicants to demonstrate compliance. The Applicants respectfully submit that application of the M-or-T Test is insufficient to make a *prima facie* rejection under 35 U.S.C. 101 because the Supreme Court overruled the M-or-T Test as the sole test for determining patentable subject matter. Furthermore, Applicant's claims are compliant with 35 U.S.C. 101 because the claims are not directed to abstract ideas, laws of nature or natural phenomena.

Acknowledgement by the Examiner that the steps of the claims are performed by a computer system and not within the realm of abstractions, laws of nature or natural phenomena, further support that the claims go beyond the asserted appearance of data gathering steps. The claims require, in part, transformative steps of receiving...an order identity of interest, intercepting...one or more market orders matching said order identity of interest, storing an identity of each of said one or more market orders, selecting and intercepting...one or more order executions, or portions thereof, matching at least one of said stored identity, receiving...real time market data related to said one or more market order executions, calculating in real time or near real time one or more execution qualities corresponding to each of said one or more order executions and said market data, and conveying in real time or near real time information regarding said one or more execution qualities to said trader; which, in whole or in part, do not constitute abstract ideas, laws of

nature, or physical phenomena. However, the Applicant, has amended the claims to more clearly indicate where each of the steps of the claim occur.

The Applicant respectfully request reconsideration and withdrawal of the rejection.

- *35 U.S.C. 103(A) REJECTIONS*

    - *Examiner's Stance*

According to the Examiner, Claims 25-28, 30, 33-39 and 42-44 are rejected under 35 U.S.C. 1 03(a) as being unpatentable over Buckwalter et al., U.S. Patent Application Publication 2003/0177085, hereafter "Buckwalter".

Claims 29,32 and 40 are rejected by the Examiner under 35 U.S.C. 103(a) as being unpatentable over Buckwalter et ai., U.S. Patent Application Publication 2003/0177085 (see PTO-892, Ref. C) in view of Quality of Execution, LLC (see PTO-892, Ref. V), hereafter "QOE".

Claims 31 and 41 are rejected under 35 U.S.C. 1 03(a) by the Examiner` as being unpatentable over Buckwalter et ai., U.S. Patent Application Publication 2003/0177085 (see PTO-892, Ref. C) in view of Agarwal, et ai., U.S. Patent Application Publication 2002/0099646 (see PTO-892, Ref. E), hereafter "Agarwal".

    - *Applicant's Response*

Rejections to claims 25-35, 37-43, and 44 are obviated by the amendments made herein. The Applicant further asserts that the references, taken by themselves or in combination, do not provide sufficient grounds for establishment of a *prima facie* case of obviousness. Analysis of the claims is based on MPEP guidelines, which are stated in the MPEP Paragraph 2143 as follows:

> "To establish a prima facie case of obviousness three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

Claim 25 (as well as claims 36 and 44, which recite similar limitations) has been amended to more clearly describe the subject matter. The presently amended claim 25 recites, in part, receiving, by said computer system operatively connected to said electronic communication network and interposed in one or more communication links between a trader and a plurality of brokers, a request from a trader to evaluate an order of interest, said order of interest having an identity. Support for the amendment may be found, inter alia, in paragraphs 0017, 0026 and original claim 14.

The amended claim, which find support, inter alia, in paragraphs 0016, 0020, and 0026, further recites intercepting, by a message intercept processor of said computer system, a communication, from said trader directed to one of said plurality of brokers over one of said one or more communication links between said trader and said plurality of brokers and prior to receipt by said one of said plurality of brokers, said communication comprising one or more market orders matching said order identity of interest; storing, by said computer system, an identity of each of said one or more market orders; selecting and intercepting, by said message intercept processor of said computer system, one or more communication from said one of said plurality of brokers directed to said trader over one of said one or more communication links between said plurality of brokers and said trader and prior to receipt by said trader, the one or more communication comprising one or more order executions, or portions thereof, matching at least one of said stored identity; receiving by an execution quality calculation module of said computer system real-time or near real-time market data related to said one or more market order executions; and calculating in real-time or near real-time by said execution quality calculation module of said computer system one or more execution qualities corresponding to each of said one or more order executions and said market data, and directly conveying in real-time or near real-time information regarding said one or more execution qualities to said trader, which are not disclosed or suggested by Buckwalter.

The Applicant maintains that nowhere in Buckwalter is it disclosed or suggested that a computer system operatively connected to said electronic communication network and

interposed in one or more communication links between a trader and a plurality of brokers
and that a request is made by the trader to evaluate an order and that communications
between the trader and one of the plurality of brokers are intercepted. Buckwalter fails to
even suggest wherein a communication from said trader directed to one of said plurality of
brokers prior to receipt by said one of said plurality of brokers ... said communication
comprising one or more market orders matching said order identity of interest are intercepted,
nor wherein one or more communication from said plurality of brokers directed to said trader
over said communication link between said broker and said trader and prior to receipt by said
trader of one or more order executions, or portions thereof, matching at least one of said
stored identity are selected and intercepted

Paragraph 32 of Buckwalter only states:

> "Order protection system 500 may be any computing device which is capable of
> performing the various functions described herein. For example, in some
> embodiments, order protection system 500 may be configured as a Web server
> adapted to exchange information with operators 106 , trading system(s) 200 , and
> sources of market data 112 . In some embodiments, order protection system 500
> is a back office system operated by (or on behalf of) the same entity which
> operates trading system(s) 200 , allowing the entity to amass, monitor, and
> evaluate options order execution data for trade requests received from its
> customers. In some embodiments, order protection system 500 is operated by (or
> on behalf of) one entity while trading system(s) 200 are operated by (or on behalf
> of) other entities. For example, a service provider may operate order protection
> system 500 as a fee-based service, allowing a number of different brokers to
> interact with the system and to utilize features of the order protection system."

No suggesting or disclosure is made of intercepting data from the one or more
communication links between the broker and trader. Buckwalter goes on to further disclose
in paragraph 37:

> "Process 200 begins at 202 where a customer order is received. In some
> embodiments, this customer order is received from trading system 200 after it has
> been submitted to trading system 200 by a customer."

Contrary to the Office Action, Buckwalter, in paragraph 20, stipulates that :

> "A customer submits an option order to a broker, requesting execution of the
> option order."

And, consistent with the "trading system 200" disclosed in Buckwalter, is the only recipient
of orders and does not receive a request from a trader to evaluate on order of interest.

Buckwalter fails to suggest or disclose that a computer system such as that described in the claim(s) might be interposed between a trader and multiple brokers, providing evaluation capabilities of multiple orders having multiple executions by multiple brokers. The Office Action, however, on page 8 asserts that it would have been obvious to one skilled in the art to convey quality execution data to a trader, and that one would be motivated to convey execution quality data to a trader because it would make the trader aware of the general quality of trading as taught by Buckwalter. The Applicant argues that such a conclusion is not grounded in the facts. There is no system or process described or suggested to convey that Buckwalter's evaluation is disclosed as serving anyone but the broker; the broker having operators managing the system. The quality data of Buckwalter, and that of QOE, are not deemed to be instantly viewable in real-time or near real-time by a trader, who is ultimately concerned with the quality of his trade executions. Buckwalter in step 212 is directed to an operator or rule process reviewing the quality data of Buckwalter (fig. 2) and QOE (page 2) alerts the user within seconds via "Email exception reports, User-friendly database queries, and Periodic summary tables emailed or available on...secure website." None of these methods were at the time, or currently, considered real-time methods of conveying information to a user.

No system or methods in Buckwalter are disclosed or suggested to convey any interest by a trader to request evaluating any particular order. Buckwalter discloses:

> "[the] quality data may be generated on a substantially real-time basis throughout the trading day to ensure that brokers and their customers are aware of the general quality of trading and to allow brokers to take corrective action on behalf of their customers. In some embodiments, the type of data stored in quality database may be varied based on customer-specified rules." [emphasis added]

Buckwalter, is directed to performing an evaluation on all trades and no methods or system have been disclosed or suggested that would support dissecting the evaluations to deliver back to a trader evaluations of select orders or executions. In addition, and contrary to the assumption provided in the Office Action, the quality of execution information deemed worthy of collecting and conveying back to the trader in the presently claimed invention may be detrimental to continued collaboration between the two parties. The Office Action wrongfully assumes that a broker would be impartial or open to providing such grading of itself to the trader and certainly not when such information will be compared to others.

Paragraph 0053 of Buckwalter offers a means for an broker operator to correct some aspect of the trade in that:

> "An action area is provided at 704 where an operator may take action (e.g., such as matching the trade at the NBBO or indicating that the price is not corrected). This action area is applied by an operator against each trade to resolve differences between the NBBO and the execution."

However, this does not even suggest or provide means for conveying in real-time or near real-time information regarding said one or more execution qualities to the trader. At least for the reasons provided, the applicants respectfully request reconsideration and withdrawal of the rejection to claim 25, and likewise to claims 36 and 44 for similar rationale.

The Applicant submits claims 26 – 35 and 37 - 43 are patentable in light of their dependence from allowable claims 25 and 36 respectively. In accordance with MPEP 608.01(n), claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. Dependent claims 26 - 35 and 37 - 43 requires elements that when considered in context of independent claims 25 and 36 respectively are not found in the cited references. The Applicant maintains that the references, taken by themselves or in combination, do not provide sufficient grounds for establishment of a prima facie case of obviousness, as set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), summarized as determining the scope and contents of the prior art; ascertaining the differences between the prior art and the claims at issue; resolving the level of ordinary skill in the pertinent art; and considering objective evidence present in the application indicating obviousness or non-obvious.

Furthermore, in accordance with MPEP 2143.03, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. Applicant notes Buckwalter fails to disclose the claim limitations as presently set forth in the independent claims 25 and 44; from which claims 26 - 43 and 37 - 43 ultimately depend. As claims 25 and 36 are not obvious in light of Buckwalter, QOE, and Agarwal, the dependent claims can not be rejected as obvious. The novelty and non-obviousness of dependent claims 26-35, and 37-43 is provided at least by the novelty and non-obviousness of independent claims 25 and 36, from which the claims depend.

Nevertheless, with regard to amended claim 26 (and with similar rationale, claim 37), the Applicant maintains that it would be non-obvious to one of ordinary skill in the art to not interfere with an order message from a trader or execution message from a broker as alleged. According to Buckwalter, which does not intercept information, information destined for a trader or broker, would have no bearing on the timing of the execution itself, and therefore it would not be obvious to intercept it for use by the trader to evaluate the quality of execution by the broker. Furthermore, none of the cited references disclose or suggest bearing on communications between the broker and trader, nor any access to intercepted market orders nor to selected and intercepted order executions communicated between the trader and the broker. As noted *supra*, the involvement of an operator in Buckwalter is contrary to the requirement in the claim to convey in real-time, and contrary to the assertions in the Office Action to not want to interfere with transmissions of communications between a trader and broker, as claimed.

Claim 27 (and with similar rationale, claim 38) is not disclosed or suggested by Buckwalter. Buckwalter, at paragraph 0040, discloses:

> "processing at 204 may include classifying the limit order by comparing the limit price to NBBO information ...These classifications may be used to generate quality data and reports"

As stated by Buckwalter the "classifications may be used to generate quality data." Classifying a limit order, per Buckwalter, is not an indication of a deviation of a value describing said at least one of said one or more execution qualities from one or more predetermined limits, as claimed.

Claim 28 (and with similar rationale, claim 39) is not disclosed or suggested by Buckwalter. The Applicant maintains that, at least, for the same rationale provided *supra*, with regard to communicating quality execution data, Buckwalter does not disclose or suggest systems or methods related to conveying execution qualities to a trader nor does Buckwalter exhibit any motivation for considering such acts on a real-time basis, as claimed.

With respect to claim 30, Buckwalter fails to disclose the claim limitation. The Applicant maintains that none of the references disclose or suggest providing information (regarding said one or more execution qualities to said trader) comprising a comparison of execution qualities for a plurality of market orders of said one or more market orders. The

summary report only depicts a table of values related to orders, not a comparison of execution quality in any respect.

Claim 33 has been amended to more clearly recite the subject matter. Support for the amendment may be found, inter alia, at paragraph 0020. Buckwalter fails, as stated *supra*, to disclose or suggest selecting and intercepting said one or more communication from said broker over said communication link between said broker and said trader and directed to and prior to receipt by said trader of one or more order executions. The reference at paragraphs 0045-46 state, contrary to the allegation that:

> "Processing continues at 212 where quality data generated at 210 is reviewed. This review may be automated using a rule-based or other system, or it may be performed by one or more operators interacting with the data using operator devices 106 . In some embodiments, only flagged information is reviewed. In some embodiments, one or more order reports may be generated using any of a number of different data combinations (e.g., reports may be generated by exchange, by customer, by symbol, by back order flow statistics, etc.)

> "In some embodiments, review at 212 may include performing full or partial trade through or trade at of unexecuted limit orders. For example, unexecuted limit orders which have been identified at 210 above may be perform trade through based on customer-specified rules. For example, one customer may specify that all unexecuted limit orders classified as "Type 1" be traded through (e.g., sent away from the broker operating trading system 200 to another broker who can achieve execution at or near the limit price) in sizes of less than or equal to 50 contracts. The customer may further specify that all unexecuted limit orders classified as "Type 2" be traded through in sizes of less than or equal to 20 contracts. The customer may specify additional trade through rules for unexecuted limit orders classified as "Type 3" or "Type 4". In this manner, customer may establish the minimum quantity expected to be satisfied given the market conditions. In the context of limit orders, for example, a trade through occurs when one exchange trades at a price better than the limit price of an order that was sent to a different exchange, and remains un-executed. Similar processing may be performed for "trade at" trades (e.g., trades where an order was traded at by a particular exchange)."

There is no suggestion or disclosure of the limitations of interfering with communication of said one or more order executions to the trader for a period of time, aggregating said one or more order executions to a predetermined size of transaction during said interfering, and conveying said aggregate of order executions to said trader, as presently claimed. Also, for, at least, the previously stated reasons, it would not have been obvious to one skilled in the art to convey the quality execution data described by Buckwalter to a trader. In addition, there would have been no motivation for one skilled in the art at the time to convey execution quality data to a trader, based on Buckwalter, because it would make the

trader aware of the general quality of trading which would subject the broker to undesirable scrutiny.

Claim 34 (and with similar rationale, claim 42) is not disclosed or suggested by Buckwalter as alleged. Neither Fig. 4 or paragraph 0053 which states:

> "entries identifying a number of pieces of information regarding customer orders which were received by trading system 200 . This quality data may be generated on a substantially real-time basis throughout the trading day to ensure that brokers and their customers are aware of the general quality of trading and to allow brokers to take corrective action on behalf of their customers. In some embodiments, the type of data stored in quality database may be varied based on customer-specified rules. In some embodiments, the type of data stored in quality database is generally fixed by the entity operating order protection system 500,"

even suggests the limitation of information related to said one or more execution qualities is accumulated over a predetermined period of time.

With regard to amended claim 35 (and with similar rationale, claim 43), the Applicant maintains that Buckwalter nor QOE disclose or suggest any of the limitations of the claim. Moreover Buckwalter fails to disclose a visual identification of a plurality of execution qualities comprising all or selected one or more execution qualities which have been earlier or currently provided for a plurality of market orders comprising all or selected market orders of said one or more market orders. Also, and at least for the previously stated reasons, it would not have been obvious to one skilled in the art to convey the quality execution data described by Buckwalter to a trader. In addition, there would have been no motivation for one skilled in the art at the time to convey execution quality data to a trader, based on Buckwalter, because it would make the trader aware of the general quality of trading which would subject the broker to undesirable scrutiny.

Amended claim 31 (and with similar rationale, claim 41) recites limitations absent in the cited references. The present limitations require, at least, the comparison of performance of two or more selected brokers using one or more execution qualities for a selected market order. The reference to Agarwal does not disclose or suggest that the grading should be related to a specific order that the trader selects, nor that a comparison of performance of two or more selected brokers is performed, and thus any motivation to combine the references is also absent.

In reference to amended claim 29 (and with similar rationale, claim 40), the Applicant maintains that the reference to QOE is absent any disclosure or suggestion that the intercepting of orders and/or executions between a trader, as previously described above. Therefore, contrary to the assertion, there is no assessing of such orders as recited in the claim.

Claim 32 is not recited by Item 7 of QOE. The Applicant maintains that QOE does not suggest or teach a comparison of said portion of executed market volume to a selected market order. QOE, depicts the aggregate volume figures 4800x3000, 4800x3000, 1200x1100, 4800x4400, and 100x3300 and an execution quantity of 200, but without any comparison made, contrary to the assertion.

The cited references fail to disclose, separately or when combined, each and every element of the pending claims, and thus do not provide sufficient grounds for establishment of a *prima facie* case of obviousness, as required under MPEP Paragraph 2143. Therefore, the Applicant believes the claims to be in allowable condition and respectfully requests reconsideration that each of the rejections be withdrawn.
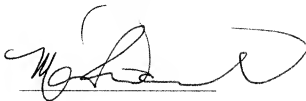
CONCLUSION TO REMARKS

Applicant asserts that this response is fully responsive to the Examiner's office action dated September 16, 2010.

Date: March 16, 2011

Respectfully Submitted,

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IV. <u>APPENDIX</u>

- None